

Notice of Allowability

Application No.

10/607,389

Examiner

Frederick C. Nicolas

Applicant(s)

CROWDER ET AL.

Art Unit

3754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 4/20/2006.
2. ☒ The allowed claim(s) is/are 31-41 and 43-59.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 5/3/2006
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with the applicants' attorney Ms. Julie H. Richardson on 5/3/2006.

The application has been amended as follows:

IN THE CLAIMS:

Claim 31, line 14, "and/or uniform" as been deleted and --or a uniform or a repeatable and uniform-- has been inserted.

Claim 52, line 14, "and/or uniform" as been deleted and --or a uniform or a repeatable and uniform-- has been inserted.

Allowable Subject Matter

2. Claims 31-41,43-59 are allowed.

3. The following is an examiner's statement of reasons for allowance: the prior art fails to disclose or render obvious a method for selecting and/or determining customizable excitation signals for dispensing dry powders in combination with the other claimed limitations of claims 31,52:

the steps of "outputting a vibration excitation signal having a second carrier frequency from the signal generator to the piezoelectric material; and determining a dispensing vibration excitation signal for the target dry powder that generates a

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repeatable or uniform or a repeatable and uniform fluid-like substantially non-agglomerated flow output based on flow data from the first and second vibration excitation signals”.

The prior art fails to disclose or render obvious a method of dispensing a dry powder in combination with the other claimed limitations of claim 41:

the steps of “adjusting the orientation angle of the elongate flow channel so that the flow channel angularly extends in a non-vertical, non-horizontal configuration and so that the outlet port is lower than the inlet port”.

The prior art fails to disclose or render obvious a method of dispensing a dry powder in combination with the other claimed limitations of claim 44:

the steps of “wherein the flowing step is carried out to serially dispense dose amounts of dry pharmaceutical powder(s), and wherein the flowing step is controllably started and stopped by the application and termination, respectively, of the electric excitation signal to the piezoelectric material”.

The prior art fails to disclose or render obvious a method of dispensing a dry powder in combination with the other claimed limitations of claim 45:

the steps of “tensioning the piezoelectric material in the flow channel”.

The prior art fails to disclose or render obvious a method of dispensing a dry powder in combination with the other claimed limitations of claim 48:

the steps of “flowing the dry powder out of the outlet port responsive to the vibrating step wherein the excitation signal has a carrier frequency and a plurality of superpositioned modulating frequencies”.

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Further, the prior art fails to disclose or render obvious a method for selecting and/or determining customizable excitation signals for dispensing dry powders in combination with the other claimed limitations of claim 53:

the steps of "vibrating the target dry powder in the flow channel with a second vibration excitation signal different from the first vibration excitation signal, the second vibration excitation signal having a second carrier frequency and a second modulating frequency; flowing the target dry powder out of the flow channel using the second vibration excitation signal; and determining a dispensing vibration signal for the target dry powder that comprises a carrier frequency and at least one selected modulating frequency that generates at least one of a repeatable or uniform fluid-like substantially non-agglomerated flow output using flow data of the target dry powder derived from the first and second vibration excitation signals".

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick C. Nicolas whose telephone number is (571)-272-4931. The examiner can normally be reached on Monday - Friday from 9:00 AM to 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin P. Shaver, can be reached on 571-272-4906. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FN
May 3, 2006



Frederick C. Nicolas
Primary Examiner
Art Unit 3754

5/3/06